


- (54) Title  
STABLE MICROEMULSION CLEANING COMPOSITION
- (51)<sup>4</sup> International Patent Classification(s)  
C11D 017/00 C11D 003/50
- (21) Application No. : 25062/88 (22) Application Date : 11.11.88
- (30) Priority Data
- (31) Number (32) Date (33) Country  
120250 12.11.87 US UNITED STATES OF AMERICA
- (43) Publication Date : 18.05.89
- (44) Publication Date of Accepted Application : 25.06.92
- (71) Applicant(s)  
COLGATE-PALMOLIVE COMPANY
- (72) Inventor(s)  
MYRIAM LOTH; CLAUDE BLANVALET; BAUDOUIN VALANGE
- (74) Attorney or Agent  
F B RICE & CO, 28A Montague Street, BALMAIN NSW 2041
- (56) Prior Art Documents  
AU 597367 73138/87 C11D 3/50 1/83 3/36  
US 4511488  
GB 2144763

(57) Claim

1. A stable aqueous microemulsion cleaning composition in concentrated form, which, in the absence of opacifying component, is clear, and which is dilutable with water to at least five times its weight, which diluted composition comprises not less than 0.4% perfume and is a stable aqueous microemulsion which is useful as an all-purpose cleaning composition, both the concentrated and diluted compositions being especially effective to clean oily and greasy soils from substrates, which concentrated composition comprises anionic synthetic organic detergent and/or nonionic synthetic organic detergent, <sup>2-50%</sup> essentially water insoluble perfume, water and co-surfactant, selected from the group consisting of an aryl substituted lower alkanol of 1 to 4 carbon atoms, propylene carbonate, an aliphatic tri-carboxylic acid of 3 to 6 carbon atoms, a mono-, di- or tri-hydroxy substituted aliphatic mono-, di-, or tri-carboxylic acid of 3 to 6 carbon atoms, a higher alkyl ether poly-lower alkoxy carboxylic acid of the formula  $R^2O(X)_nYCOOH$ , wherein  $R^2$  is a  $C_{9-15}$  alkyl,  $X$  is  ~~$CH_2CH_2O$~~ ,  $CH(CH_3)CH_2O$  or  $CH_2CH_2CH_2O$ ,  $n$  is from 4 to 12, and  $Y$  is  $CH_2$ ,  $C(O)R^3$  or  $C(O)$  , wherein  $R^3$  is a  $C_{1-3}$  alkylene, or a lower alkyl mono-,

di-, or tri-ester of phosphoric acid, wherein the lower alkyl is of 1 to 4 carbon atoms

which co-surfactant, by reducing interfacial tension at interfaces between dispersed and continuous phases of an emulsion of said detergent, perfume and water, produces a stable concentrated microemulsion which, in the absence of opacifying component, is clear and stable at temperatures in the range of 5 to 50°C.,

and is at a pH in the range of 1 to 11, and which composition does not contain any solvents for oils and greases other than the perfume.

17. A process for manufacturing a stable aqueous microemulsion cleaning composition in concentrated form, which, in the absence of opacifying component, is clear, and which is dilutable with water to at least five times its weight, which diluted composition comprises not less than 0.4% perfume and is a stable aqueous microemulsion which is useful as an all-purpose cleaning composition, both the concentrated and diluted compositions being especially effective to clean oily and greasy soils from substrates, which concentrated compositions comprises anionic synthetic organic detergent and/or nonionic synthetic organic detergent, <sup>2-50%</sup> essentially water insoluble perfume, water and co-surfactant, which co-surfactant, by reducing interfacial tension at interfaces between dispersed and continuous phases of an emulsion of said detergent, perfume and water, produces a stable concentrated microemulsion which, in the absence of opacifying component, is clear and stable at temperatures in the range of 5 to 50°C., and is at a pH in the range of 1 to 11, and which composition does not contain any solvents for oils and greases other than perfume,

which process comprises dissolving the synthetic organic detergent in the water, admixing the co-surfactant with the aqueous detergent solution and subsequently admixing the perfume with the aqueous solution or emulsion of detergent, water and co-surfactant, at a temperature in

(11) AU-B-25062/88  
(10) 624795

-3-

whereby the oily soil is absorbed into the dispersed lipophilic phase of the composition and removing such composition and the oily soil from such surface by wiping after rinsing with water in an amount of no more than ten times the weight of composition applied,

said composition being a stable microemulsion cleaning composition in concentrated form, which, in the absence of opacifying component, is clear, and which is dilutable with water to at least five times its weight, or in diluted form which diluted composition comprises not less than 0.4% perfume and is a stable aqueous microemulsion which is useful as an all-purpose cleaning composition, both the concentrated and diluted compositions being especially effective to clean oily and greasy soils from substrates, which concentrated composition comprises anionic synthetic organic detergent and/or nonionic synthetic detergent, <sup>2-50%</sup> essentially water insoluble perfume, water and co-surfactant, which co-surfactant, by reducing interfacial tension at interfaces between dispersed and continuous phases of an emulsion of said detergent, perfume and water, produces a stable concentrated microemulsion which, in the absence of opacifying component, is clear and stable at temperatures in the range of 5 to 50°C., and is at a pH in the range of 1 to 11, and which composition does not contain any solvents for oils and greases other than the perfume.

19. A process for removing oily soils from surfaces which comprises applying to such surfaces from which the oily soil is to be removed a composition defined hereunder, the range of 5 to 50°C., which results in a clear and stable microemulsion cleaning composition in concentrated form, which is of a pH in the range of 1 to 11, and in which the perfume is of particle sizes in the range of 25 to 800 Å in diameter, dispersed in a continuous aqueous phase.